

DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMITTING & COMPLIANCE DIVISION

Air & Waste Management Bureau

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STATE OF MONTANA

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PO BOX 200901
HELENA, MONTANA 59620-0901

December 29, 1998

Mr. Jon Nickel
ASARCO East Helena
P.O. Box 1230
East Helena, MT 59635

CERTIFIED MAIL

Re: VIOLATION LETTER

Dear Mr. Nickel:

Based on the November 4 and 5, 1998 compliance evaluation inspection of the ASARCO East Helena facility, the Department has determined that violations of state hazardous waste regulations have occurred at this facility.

During the inspection, a number of bins were observed which are used to store and dewater tank bottom sludges. After dewatering, the tank bottoms are charged to the facility's blast furnaces. The bins consist of three concrete walls and a berm of crushed limerock. During the inspection, it was noted that liquid was seeping from each limerock berm toe and flowing onto a concrete roadway. Analysis of samples taken from the bins shows the accumulated tank bottoms exhibit the toxicity characteristic for lead and cadmium. ARM 17.54.421 (4)(a) requires that during the time small and large generators accumulate hazardous waste on-site, the following requirements apply:

* The waste must be placed in containers, tanks or containment buildings, or may be collected on drip pads associated with wood treating operations. For wastes which the generator chooses to store in containers, the generator must comply with subpart I of 40 CFR part 265 [ARM 17.54.421 (4)(d)]. For wastes, which a large generator stores in tanks, the large generator must comply with subpart J of 40 CFR part 265, 40 CFR 265.111 and 40 CFR 265.114 [ARM 17.54.421 (4)(e)]. For wastes placed in containment buildings, the generator must comply with subpart DD of 40 CFR part 265 [ARM 17.54.421 (4)(h)]. The bins at the ASARCO facility, used for the accumulation and treatment of tank bottoms identified as hazardous waste, do not meet the definition of containers, tanks or containment buildings.

* ARM 17.54.421 (1) requires that large generators may accumulate hazardous waste on-site for up to 90 days without a permit. ASARCO currently does not have a permit to accumulate hazardous waste for longer than 90 days. During the Department inspection, it was unclear

whether the tank bottoms are accumulated for no more than 90 days.

* ARM 17.54.421 (4)(b) requires that for accumulation in containers or tanks, the date upon which each period of accumulation begins must be clearly marked and be visible for inspection on each container or tank. During the Department inspection, no accumulation start dates were observed on any of the bins.

* ARM 17.54.421 (4)(c) requires that each container or tank used for accumulation must be labeled or marked clearly with the words "HAZARDOUS WASTE." During the Department inspection, no hazardous waste marking was observed on any of the bins.

During the file review portion of the inspection, staff observed that ASARCO did not have generator original copies signed by the receiving facility for two hazardous waste manifests. An excess of 45 days had lapsed from the date the manifests were signed and the date of the Department inspection. As was discussed during the inspection, ARM 17.54.427 (1) requires a large generator, who does not receive a copy of a manifest with the handwritten signature of the owner/operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter, to contact the transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste. Further, ARM 17.54.427 (2) requires a large generator must submit an exception report to the Department, if it has not received a copy of the manifest with the handwritten signature of the owner/operator of the designated facility, within 45 days of the date the waste was accepted by the initial transporter.

During the inspection, Department staff requested information from ASARCO. First, ASARCO was requested to provide the Department with a copy of the certification by a qualified registered professional engineer that the ASARCO containment building, referred to as the direct smelt building, meets the requirements of subpart DD of 40 CFR part 265 [ARM 17.54.421 (4) (h)]. Secondly, ASARCO was requested to submit to the Department copies of transaction records involving sulfuric acid produced at the ASARCO facility since January 1, 1992. Those records would include: names and locations of customers; if known, intended uses of the acid; and volumes provided to individual customers.

Based on the findings of the November 4 and 5, 1998 inspection, ASARCO is required, within ten (10) days of receipt of this correspondence, to provide the Department with:

* Evidence that storing tank bottoms in outdoor bins did not result in the release of hazardous waste or hazardous waste constituents to the environment;

* Evidence that the tank bottoms are accumulated for no more than 90 days without a permit;

* A written description of the measures that will be taken to insure that tank bottoms, identified as hazardous waste, are accumulated/treated in acceptable containers, tanks or containment buildings;

* If containers or tanks are used for this accumulation/treatment activity, a written description

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of the procedure(s) that will insure proper marking, including accumulation start dates, of the containers or tanks; and

* An exception report regarding ASARCO's efforts to locate the hazardous waste and the results of those efforts associated with the two unsigned manifests. That report must include a legible copy of the manifests for which ASARCO does not have confirmation of delivery.

Within twenty (20) days of receiving this correspondence, ASARCO is required to provide to the Department information on the sulfuric acid produced at the ASARCO facility since January 1, 1992. This information should include business records detailing all sales and purchasers of sulfuric acid used as an agricultural product in any form; business records describing and/or showing the end use of the sulfuric acid; and business records listing the names, addresses and phone numbers of all customers of ASARCO for the product of sulfuric acid.

In addition, the Department is requesting a copy of your containment building certification within ten (10) days of receipt of this correspondence.

This Violation Letter is being issued based on the Department's determination that violations have occurred as described above. Based on the seriousness of the violations, the violations may be referred to the Department's Enforcement Division. The Enforcement Division will evaluate the case and determine if enforcement actions and/or penalties are needed.

Pursuant to Section 75-10-424, MCA, the Department may seek administrative penalties up to \$10,000 per day per violation.


As per your request, the inspection photos and sampling results are attached to the enclosed report.

If you have any questions on this correspondence or the enclosed report, please call Bill Potts at 444-5286 or Adel Johnson at 444-1424.

Sincerely,



Bill Potts
SHW Specialist



Adel Johnson
Environmental Engineer

Enclosure

cc: Susan Zazzali, Montana EPA

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting & Compliance Division
Air & Waste Management Bureau

FIELD INVESTIGATION REPORT

SITE: ASARCO East Helena

EPA ID#: MTD006230346

LOCATION: East Helena, MT

DATE & TIME: November 4, 1998 8:35 a.m.
November 5, 1998 1:30 p.m.

INSPECTION LENGTH: 1 1/2 days

CONTACT: Jon Nickel

INSPECTION TEAM:

Adel Johnson, MDEQ, Air and Waste Management Bureau
William Potts, MDEQ, Air and Waste Management Bureau
Susan Zazzali, Montana EPA

PURPOSE: Compliance Evaluation Inspection

REPORT PREPARED BY: Bill Potts, Adel Johnson

BACKGROUND: ASARCO Inc.'s East Helena Plant (ASARCO) is a primary lead smelter plant which also functions as a custom smelter for a variety of materials. As part of a stipulation signed March 15, 1994, between the Department and ASARCO which specified sulfur oxide emission limitations, ASARCO maintains an acid plant which produces commercial grade sulfuric acid. ASARCO currently is registered with the Department as a Class V, large generator. The smelter was last inspected for hazardous waste regulatory compliance on April 21, 1997.

RESULTS OF INSPECTION:

The inspection team met with Jon Nickel, Environmental Manager, and explained the purposes of the inspection. Mr. Nickel was informed that the inspection was considered a compliance evaluation inspection of all on-site hazardous waste activities, as well as an evaluation of the facility's materials acceptance procedures (MAPs).

Mr. Potts reviewed manifests prepared by ASARCO for the preceding year. The manifests were prepared for the off-site shipment of high cadmium baghouse dust, contaminated debris, spent catalyst, spent saddles and flue brick. ASARCO did not have generator original

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copies signed by the receiving facility for two manifests. One manifest, # 00154, was for a shipment of contaminated soil and was signed by ASARCO on 09/18/98. The other manifest, # 00160, was prepared for a shipment of flue brick and was signed by ASARCO on 09/17/98. A conversation ensued with Mr. Nickel with respect to manifest exception reporting requirements found in ARM 17.54.427 (40 CFR 262.42). It was explained that a large generator, who does not receive a copy of a manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter, must contact the transporter and/or the designated facility to determine the status of the hazardous waste. And further, the large generator must submit an exception report to the Department if it has not received a copy of the signed manifest within 45 days of the date the waste was accepted by the initial transporter. Mr. Nickel explained that often when shipping bulk loads of hazardous waste by railroad, ASARCO will not receive a signed manifest within 35 days from a receiving facility because of delays in transit by the shipper(s).

The inspection team did not review ASARCO's hazardous waste contingency plan and emergency procedures. During the spring of 1998, the Department received an updated document from ASARCO titled "Spill, Prevention, Control and Countermeasures (SPCC) Plan, CERCLA Emergency Response Procedures, RCRA Contingency Plan." That document has been reviewed by Department staff, and it appears to meet all hazardous waste contingency plan and emergency procedures requirements.

A request was made to review ASARCO's material acceptance program. Mr. Nickel stated that for over a year they have been using material acceptance profiles as documentation of their material acceptance program and went on to explain how MAPs works. When a company wants to sell a secondary material to ASARCO, they contact Deb Horn of the sampling mill. She sends them a material acceptance form packet to fill out. The packet is then sent to Richard Marcus in Omaha. If the material is accepted by Mr. Marcus, it is added to the secondary material acceptance sheet and a contract is negotiated. (See Attachment 1 for the secondary material acceptance sheet.) After the inspection team reviewed the listing of approved secondary materials and the inventory check list for October 1998, the following MAPs were selecting for review by Ms. Johnson and Ms. Zazzali:

Company

1. Ramkee Industry
2. Safety-Kleen
3. ASARCO-Tacoma Plant

Material

Jewelry gypsum
Gold/silver sweeps
Godfrey calcines

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4. Encycle	Lead sulfide (Glover matte)
5. Big River Zinc	Zinc leach residue
6. Academy Corp.	Refractory
7. ASARCO-Tacoma Plant	Godfrey/WTESR
8. Eastman Kodak	Harrow flotweg mud
9. Martin Metals	Calcine cubes
10. Martin Metals	Electronic ceramics
11. Commodity Resource & Env.	Gold/silver sweeps
12. ECS Refining	Photochemical silver precips

See Attachment 2 for the October 1998 inventory check list. Attachment 3 contains the MAPs for materials 2, 3, 4, 7, 9, 10, 11, and 12.

The MAPs reviewed by Ms. Johnson were satisfactory. However, several discrepancies were found in the MAPs reviewed by Ms. Zazzali and concerns were raised about the following materials:

ASARCO-Tacoma Plant Godfrey calcines and wastewater treatment sludges: These materials come from a former copper smelter site that is currently undergoing Superfund remediation. As explained by Ms. Zazzali, if these materials are remediation wastes, then the Off-Site Rule would apply and ASARCO East Helena should have gotten permission from EPA Region VIII before accepting the materials. Also, Ms. Zazzali was concerned about the high arsenic levels in the material and whether the materials can be legitimately recycled.

Encycle Glover matte: This material is from ASARCO's Glover primary lead smelter. Before the material is shipped to East Helena, sodium salts are leached from it at Encycle. Because the material is treated prior to recycling at East Helena, the material may not be exempt from EPA hazardous waste regulations.

Martin Metals electronic ceramics and calcine cubes: The acceptance memo (first page of the MAP package) from Mr. Marcus states the materials are a characteristic by-product; however, the addenda (last page of the MAP package) states the materials are a scrap metal when recycled. Also, the addenda certification is not signed.

Safety-Kleen gold and silver sweeps: This MAP states these materials exhibit the toxicity characteristic; however, ASARCO's analytical data and acceptance memo does not indicate this.

Commodity Resources and Environment silver and gold sweeps: The gold and silver sweeps come from photographic scrap, photo chemicals, and scrap film. Usually these materials are derived from a listed hazardous waste. The MAP concurs that these

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materials are derived from a listed hazardous waste; however, the addenda indicates the material is not derived from a listed hazardous waste.

While the MAPs were reviewed, ASARCO's handling of baghouse dust was discussed. Mr. Nickel stated the dust contains 16 to 17 percent cadmium and had been recycled in the past. However, since the summer of 1997, the dust has been disposed of as a hazardous waste because a cadmium recycler cannot be found.

Mr. Potts inquired how ASARCO monitors on-site generated materials intended for recycling to prevent speculative accumulation. The team was provided with a copy of an inventory sheet maintained to prevent speculative accumulation. Mr. Nickel stated that all secondary materials are tracked on this list. See Attachment 4 for the list.

After finishing the paperwork review, the inspection team physically inspected the facility. The inspection team was accompanied by Mr. Nickel and Rob Ashley, plant waste management coordinator.

Throughout the first day of the inspection, the inspection team evaluated numerous generation/accumulation points which are discussed below.

PPE Building. The inspection team observed two - 2 1/2 cubic yard bins used as an accumulation point for the collection of expired air filters. The bins were marked as "hazardous waste no incompatible waste no smoking, lid must be closed when not in use" and was affixed with an accumulation start date of 10/02/98.

Ore Storage Yard. ASARCO personnel were excavating contaminated soil from a drain near a truck scales. The contaminated soil was being placed in a rail gondola car which was properly marked and affixed with an accumulation date.

Ore Storage Yard/Acid Plant. In this general area, three roll-off containers were observed. As smaller accumulation bins are filled throughout the facility they are dumped into the roll-off containers. The containers were marked as containing hazardous waste and each was securely tarped. The accumulation start dates on the containers were the same as found on the smaller bins.

Machine Shop. One small cold bath parts washer containing Stoddard solvent was observed in this shop. ASARCO personnel stated the washer is changed out every nine to twelve months, and the contents are handled as hazardous waste. The area contained one-1 1/4 cubic yard bin which was marked as containing hazardous waste and dated

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10/02/98.

Electric Shop. The shop contained one-1 1/4 cubic yard bin which was marked as containing hazardous waste and was affixed with an accumulation date of 10/02/98.

Acid Plant Shop. The shop contained one-2 1/2 cubic yard bin which was marked as containing hazardous waste and was dated 10/02/98.

Carpenter Shop. No hazardous waste in accumulation.

Pipe Fitting Shop. No hazardous waste in accumulation.

Used Oil/Hazardous Waste Accumulation Building. Two-55 gallon drums of contaminated diesel fuel were observed. Mr. Nickel stated the fuel is used as a fire starter for the blast furnaces. The inspection team also observed two-55 gallon drums marked as "Used Oil." Mr. Nickel stated that used oil generated at the plant is picked up by Ozzies Drain Oil.

Equipment Wash Down Building. The area contained one-2 1/2 cubic yard bin which was properly marked and affixed with an accumulation start date of 10/02/98.

Paint Shop. The shop contained one-55 gallon drum which was marked as containing hazardous waste. ASARCO considers the drum to be a satellite accumulation point.

Sanitary Sewer Treatment Plant. Sludges from the plant, which typically exhibit the toxicity characteristic for cadmium, are removed from the plant approximately every 90 days and shipped off-site as a hazardous waste. Mr. Nickel could not provide information as to the quantity of hazardous waste generated at the treatment plant.

The team inspected the ore storage yard and were joined by Deb Horn, who answered various questions about the stored material. Generally, the segregated materials were stored in bins or on pallets in containers, such as super sacks, boxes, and plastic or metal drums. Mr. Nickel stated they are discouraging companies from using plastic drums, because both the drums and material are charged into the furnace. Each bin or group of containerized material was marked with a pile number. The pile number corresponds to the material's name on the inventory check list found in Attachment 2. The bins are constructed with one open side and three walls: one high back wall made of concrete blocks, and two side walls made of concrete highway dividers. While discussing the storage area, Mr. Nickel stated the storage bins would not meet Phase IV regulations.

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Some of the materials in the bins included Rumanian dross (complex mixture of metal sulfides), Sony glass, and Brazilian sogem (silver concentrate). Some materials that were stored in containers included Kodak paper, ECS router dust, and Encycle lead. Materials to be shipped off-site, such as milled speiss, were also stored in this area. One empty bin was marked as a quarantine area. When asked about the area, Mr. Nickel stated that on the rare occasion when they receive materials that do not have a valid contract, they place the material in the bin. One material that ASARCO use to receive, but no longer accepts is shredded circuit boards. Mr. Nickel said it was too difficult to obtain a representative sample for metals analysis.

The inspection team proceeded to the direct smelt building. This building contains numerous storage bins and is used to store non-containerized materials that are directly charged into the furnace. According to Mr. Nickel, the building meets the requirements of 40 CFR Part 265, Subpart DD for containment buildings and is certified by a professional engineer as meeting those requirements. Mr. Potts requested a copy of the certification. Similar to the ore storage yard, the piles are marked with numbers which correspond to the inventory check list in Attachment 2. From the brief inspection of the building, it appeared that it met the design and operating standards for a containment building found in 40 CFR 265.1101.

The team left the facility for a lunch break and agreed to resume the inspection in the afternoon.

Upon our return to the facility, Mr. Nickel gave the State and EPA each a copy of the MAPs found in Attachment 1. Ms. Zazzali reiterated EPA's concerns about Encycle Texas lead/copper sulfide material (Glover Matte) and Commodity Resources and Environment silver and gold sweeps. See pages 3-4 for a summary of her concerns.

The team then resumed the physical inspection of the facility. On the south east outer edge of the blast furnace flue, Mr. Nickel pointed out an incinerator used to dispose paper and office refuse.

Near the used oil storage area (adjacent to the blast furnace flue on the south east side of the facility), Mr. Nickel showed us several bins used to store and dewater tank bottom sludges. The bins were made of three concrete walls and a berm of crushed limerock. The tank bottoms are dewatered in the bins and then charged to the blast furnaces. ASARCO has previously contended in a letter to the Department dated September 22, 1997, the tank bottoms dewater through natural evaporation and through absorption into the limerock berms. Further, ASARCO has maintained that the

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limerock berms serve to control run-off from the tank bottoms storage area and that air emissions are nonexistent because of the moisture content of the material.

The team then proceeded to an area where HDS and acid plant dewatered sludges are stored. This area consists of rooms attached to each plant, where dewatered sludge is collected and then fed directly to facility furnaces. Access to each room is through large doorways with overhead garage type doors. The area around the doors are lined with asphalt and appeared clean and well maintained.

While walking to the 2-million gallon tanks, Ms. Johnson asked how ASARCO handles their street sweepings and used fluorescent lights. The street sweepings from the plant and East Helena are charged back into the plant and the fluorescent lights are placed into the hazardous waste dumpsters and sent off for disposal.

At the million gallon tanks, Nash Industrial Cleaning Services of Missoula was cleaning out tank bottoms from the north tank. The sludge-like material was six inches to one foot deep. The tank bottoms are removed using a vacuum truck and are placed in the dewatering bins mentioned previously.

The team then proceeded to the slag pile and "bone yard" on top of the pile. The "bone yard" contains various pieces of old equipment including kettles, hoppers, and duct work. Mr. Nickel explained they have been trying to clean up the "bone yard" by sorting out usable material and hiring the firm Rosen Brothers to cut up and recycle the rest of the metal material.

The team briefly stopped at the first tank in the plant water circuit, the Thornock tank. Mr. Nickel stated the Thornock tank receives the majority of sludges, because it is the first major tank where settling takes place. The sludges that settle in the tank are removed and dewatered in the previously described bins.

The team then stopped at the laboratory building. The laboratory maintains two, small, outdoor dumpsters; one of which is used for the disposal of office trash; and the other is segregated for the disposal of laboratory assay crucibles and cupels. The office trash dumpster material is disposed of in the previously mentioned incinerator, and the material in the latter dumpster is periodically charged to the plant furnaces.

All were in agreement to finish the inspection the next day at 1:30 p.m. and the team left the plant at approximately 4:50 p.m.

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Jon Nickel and the plant manager, John Shaw, met with the inspection team the next day to discuss the inspection results.

Mr. Potts briefly discussed the observed improvements in waste management practices at the ASARCO facility. He also explained problems identified with manifest procedures.

Mr. Shaw stated ASARCO is going to sell all router dust currently on site and will not accept router dust for recycling in the future because the material is too difficult to handle.

Ms. Zazzali summarized the MAPs discrepancies previously described in this report.

Mr. Potts requested a copy of the engineering certification for the direct smelt building. Mr. Shaw said he would send us a copy.

A discussion on tank bottom sludges then ensued. Mr. Nickel explained that once the tank bottoms are removed, they are placed in the concrete bins near the waste oil storage area where the sludge is dewatered by evaporation and the limerock berm soaking up water. Because the tank bottoms have a high metals content, they exhibit the toxicity characteristic. The tank bottoms from the one million gallon tanks were currently contained in the bins. The inspection team requested to see the bins again after this meeting.

Mr. Potts and Ms. Zazzali contended that dewatering the tank bottoms prior to recycling is treatment; therefore, the tank bottoms are considered a waste and should be dewatered in a tank, container, building, or pad that meets CFR specifications. As long as the tank bottoms are treated within 90 days in one of these vessels, ASARCO could treat the waste themselves without a permit. Mr. Nickel contended that since the tank bottoms are not discarded and they recycle the sludge within 90 days, ASARCO is currently handling the waste properly. Mr. Potts went on to explain that the way ASARCO is presently handling the sludge would not meet the current or Phase IV standards, and the main objective is to eliminate releases (e.g. water) to the environment. We discussed how ASARCO could handle the sludge differently, such as using the HDS plant thickener for treatment.

Mr. Nickel was asked if the tank bottoms were ever sampled by ASARCO. He said they had sampled the waste for SARA total metals, but not for TCLP metals. Mr. Potts stated we may take samples of the tank bottoms and analyze them for TCLP metals. Mr. Nickel did not want to take duplicate samples, but did want a copy of the results.

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Mr. Potts raised the issue about the uses of sulfuric acid produced by ASARCO and requested information on who buys the acid and what they use the acid for. Based on analytical data provided by ASARCO, the acid exhibits the toxicity characteristic for mercury, lead and cadmium.

Mr. Potts asked if ASARCO wanted to develop the photos from the inspection or have copies sent to them. Mr. Nickel said they would like copies. See Attachment 5 for the inspection photos.

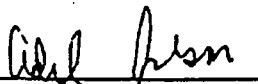
The inspection team then departed to the sludge dewatering bins. Three bins were located on the west wall of the blast furnace flue (Bin 98) and two were located next to the used oil storage shed (Bin 97A and 97B) across the road. All of the bins contained sludge-like material. It appeared that water was seeping from each limerock berm's toe and flowing onto a concrete roadway.

Three grab samples were gathered by Mr. Potts and Mr. Nickel: two sludge samples from the bins along the flue and one from Bin 97B. Mr. Nickel signed the chain of custody record and sampling receipt before the inspection team left at approximately 3:15 p.m.

The samples and paperwork were packed into a cooler and sent via bus to Energy Laboratories in Billings on November 6. The analytical results are contained in Attachment 6. All samples exceeded Toxicity Characteristics regulatory limits for cadmium and lead.

RECOMMENDATIONS: See attached cover letter.

December 29, 1998
Date of Inspection Report


Adel Johnson

Environmental Engineer



Bill Potts

SHW Specialist